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Connecting the dots to build the future teaching and learning

Teachers Alliance Varkey Foundation



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Teachers Alliance Varkey Education Foundation.

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Executive Summary

This paper outlines a seven-point strategy to devise a system of continuous improvement of teacher quality and, through it, the quality of education as a whole.

Education is one of the single most important initiatives that can be undertaken to improve the quality of life, financial security and economic potential of a given population. There is no disputing the benefits of a strong education system. The challenge is in the design and implementation of such a system, and creating the political will to see the system through.

For such a program to be implemented, teacher quality and the quality of education as a whole must be considered a national priority. Educational and political leaders must support these initiatives publicly, place them on their policy agenda and establish a blue ribbon commission to develop a strategy to significantly and measurably improve teacher quality.

The blue ribbon commission will audit the various policies and programs that influence teacher quality. By mapping these programs and their coherence, the commission will identify opportunities to increase their effectiveness and yield greater and more synergistic harmonious results.

These changes can form the basis for a strategy that is sequenced and calibrated to deal with specific entry points, concerns and constraints for the region in question. The steps necessary to promote teacher professionalism may differ where there are serious shortages of teacher candidates or where chronic absenteeism is rampant, or where there is a dearth or glut of technology and infrastructure. This determination will also highlight what role the private sector or civil society can play in the education development in the region.

Making teaching an attractive profession is crucial to the strategy, to ensure a constant flow of qualified applicants who can capitalize on their initial training, and take full advantage of continuous learning throughout their careers.

Clear career trajectories and incentives tied to performance, as well as a system to accurately measure performance outcomes will provide a pathway to teacher professionalism. The quest for professionalism must begin at the institutions charged with teacher preparation. The blue ribbon commission should include incentives and support for these institutions, providing the support necessary to review and improve their programs to ensure the best results.

Innovating the preparation of teachers is integral to the strategy. Rapidly changing societies require versatile teachers to equip their students with a dynamic array of tools to face a dynamic world. Teacher professional development must take into account this need, ensuring that the pre-service education programs align with professional standards, are goal-oriented, and include holistic, integrated and innovative projects. Technology and collaborative projects will also serve a crucial role in the pre-service education of teacher candidates, as well as the life-long development of teachers.

The core of good education is a skilled and versatile teaching staff. In order to effect significant improvements to the quality of education, a cohesive strategy is required so that we can combine what we know already into an efficient system which can be implemented worldwide at the scale necessary to succeed. The dots need to be connected.

Teachers Alliance



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Introduction

This is a call for action to leaders of governments, non-governmental organizations, educators, civic leaders and ordinary citizens to urgently address seven areas which are critical to significantly improve the quality of education received by most children in school. These actions strategically support coherence and alignment of policies and programs that, as a system, sustain teaching quality.

1. Build a narrative about improving teaching quality as a national priority
2. Map and audit the system of programs and policies that sustains teaching quality.
3. Develop a strategic teaching quality framework and professional standards that create coherence in the system which supports teacher quality.
4. Empower teachers as professionals. Develop career pathways.
5. Ensure a robust pipeline of qualified entrants into teaching
6. Support highly effective initial teacher preparation
7. Support developmental professional trajectories for teachers that produce highly effective teaching

Educators and policy makers understand the importance of quality teachers and quality teaching. Paradoxically, while the policy interventions which can enhance teacher quality are well known and there is increasing priority and support given to teacher preparation, these have not translated into generalized and effective supports for teachers to develop the competencies necessary to educate students well. At the root of this problem is an inadequate understanding of the systemic nature of those policies, of how they need to act in tandem with each other, and a failure of leadership to bring about the necessary collective action to create alignment and coherence in the systems that support teacher effectiveness. While the dots that matter to improve teaching quality are known, the system that connects them needs to be brought to the foreground of reform efforts.

This document proposes a seven action framework to align the system that supports teaching and learning so students are adequately prepared to become architects of their own lives and participants and contributors in their communities. The emphasis of this framework is on the systemic nature of the necessary interventions to transform the conditions in which students learn and teachers teach. These systemic interventions require coordinated efforts of multiple stakeholders and institutions, hence the need for collective action, and for strategy and leadership that can mobilize such collective action on behalf of a shared vision of educational transformation. Absent such leadership and strategy, disparate initiatives work at cross-purposes, subtracting from each other, rather than producing synergies.

¹See for instance, Oon Seng Tan. *Teacher Policies: Global Best Practices for Developing the Teaching Profession*. Doha, Qatar: World Innovation Summit for Education. 2016.

Action 1. Build a narrative creating a sense of urgency about quality education and excellent teaching.

To signal the urgency and importance of quality education and excellent teaching education, education and political leaders will issue public statements in which they commit themselves to placing those issues on the policy agenda and will establish a blue ribbon commission to develop a strategy to significantly improve teacher quality. This commission will provide thoughtful leadership and develop an implementation plan for the strategy.

Educational, political and civic leaders need to place teacher quality at the top of the agenda of their societies, not just of governments. In the past, the seeming complexity of supporting quality teaching has led some of them to see this as an intractable challenge and to avoid taking it on. Piecemeal efforts to improve teachers who fail to produce the intended results end up discouraging those who attempt them. Complex as the challenge is, it is tractable, and the leadership opportunity for those who take it on is to place it on the agenda, understand the key dimensions of the system and of the challenge, and to clarify those dimensions for the key stakeholders who need to be mobilized in the essential collective action to reform the system that underlies teacher quality.

Consequently, the first step in solving the complex challenge of reforming the system of quality teaching is for leaders to embrace it as an audacious goal, and to set to align this system with bold and ambitious aspirations for schools which help define what great teaching is. The audacious goal of revamping teacher preparation and support should be integrated, coherent and aligned with the economic and social goals for the country, and with the Sustainable Development Goals and the advancement of Human Rights.

The work of teachers should be rethought not only to serve current understandings of how students best learn, and of what they should learn to participate meaningfully in societies that are changing rapidly, and the aspiration that all students should learn, but also the need for differentiation in instruction, that honors individual differences in interests and needs and that successfully engages all students. This professional practice is demanding and complex, it will require collaboration among teachers and other professionals, and supporting teaching with various instructional technologies that can use information on student learning to create personalized opportunities for each student.

The professional practice of teaching needs to be supported by the best evidence of how different students learn, and guided by the ambitious goal that all students should learn at high levels and develop a broad range of competencies, cognitive, as well as interpersonal and intrapersonal, such as creative and critical thinking, collaboration, problem-solving and inquiry skills, competence to utilize versatile tools in learning and working, competence to act in different contexts, like such as personal, social and global, including sustainable and responsible citizenship. Supporting the learning environments that enable students to develop such competencies requires teachers who themselves display such competencies and who can teach them.

Action 2. Map the complex system underpinning teaching support and audit its coherence.

The blue ribbon commission to address teacher support will conduct an audit, a map, of the various policies and programs that influence teacher quality, and will assess their coherence, identifying opportunities to increase their effectiveness and to yield greater synergies.

High quality professional practice is the result of proximate and distant conditions that support it. It is the result of a social and institutional context and of structures and processes that constitute a complex system. Identifying the elements of this system, and how they interact, is a necessary condition to redesign the system to be able to redirect it to more ambitious goals. Failure to see how each policy interacts with others in such a system explains why so many attempts to influence teaching quality fail to achieve their results, and it is the reason many leaders perceive high quality teaching as an intractable problem.

For instance, raising the requirements for entry into initial preparation programs, in a context where the profession is unattractive, is likely to further diminish the number of available candidates, alienating teacher

preparation institutions from these efforts and eventually producing teacher shortages. Increasing funding available to districts or local authorities for professional development, without guidance or norms that help align those programs to the needs of teachers, and to their developmental trajectories, may translate into programs that are not matched to what teachers need to develop. Aligning teacher preparation with an ambitious vision for the competencies students should develop, without aligning student assessment may change little in classroom practice. It is necessary to understand how the various elements of the system support or undermine each other, and in particular to understand the system as teachers and school leaders perceive it.

Once the system is made visible, and its elements understood, it becomes tractable. The elements of such a system are proximate, many located in the organization of the classroom and school, as well as distal. The most proximal elements influencing practice include the goals of instruction and curriculum, the students with their prior knowledge and motivation, the knowledge, skills and motivation of the teachers, the instructional resources available to teachers, the assessment regime for students and for teachers and the accountability structure. These elements define the core of day to day instruction.

The elements that form the core of instruction are in turn nested in a context shaped by the following elements: the support students receive from parents and communities, the support students received from prior teachers, the support teachers receive from colleagues, school leaders and administrators, from opportunities for professional development, and from the organization of the school.

Action 2. continued

These two systems are supported by a range of policies such as those that attract candidates to the teaching profession, the incentives teachers face (including compensation) and the respect and esteem they are held in the communities where they teach, the initial preparation they received, the structures for development in the profession of teaching, the opportunities for ongoing professional development.

Those policies, in turn, are embedded in societal goals for education, governance structures, supported by financing policies and impacted by the politics through which various groups negotiate education goals and the means to achieve them.

Tying all these elements together, or not, is leadership. Since there are often multiple levels of governance implicated in education, and numerous organizations involved in contributing various services to the education process, orchestrating coherence among these various efforts calls

for collective action, for coordination. Leading such collective action, particularly towards embracing bolder and more ambitious goals, requires adaptive leadership grounded in systems change of loosely coupled collectives, in influencing networks, with limited influence resulting from positional authority or formal power.

Careful mapping of existing processes, structures and institutions that influence teaching quality can help explain what purposes and interests the current system serves, what competencies it helps teachers develop, and identify potential misalignments among policies or programs. Then, this system can be audited in terms of its potential to support the deeper learning and powerful instruction for all children reflecting the ambitious vision outlined earlier. This exercise of analysis of the underlying logic of the system in place is a precondition to devise a strategy and a change management process to realign this system towards greater relevance and coherence.

Recruitment
Policies

Incentives

Status and
respect

Initial
preparation

Career
pathways

Professional
development

Action 3. Calibrate the system so it is coherently aligned to ambitious goals and clear standards of practice

The blue ribbon commission will develop a strategy, mapping action steps and a sequence to create a fully integrated and coherent system of teacher support aligned with an audacious vision for education and with clear professional standards for teachers and principals.

Once the system of teacher preparation and support has been mapped and assessed, it becomes feasible to identify the necessary changes towards greater coherence. These changes can then form a strategy, which will sequence the elements of reform into a series of meaningful stages. A strategy to calibrate a system towards coherence will have to be sensitive to the particular entry points, resource constraints and other contextual conditions of each country. For instance, what steps are advanced to promote teacher professionalism might differ in contexts where there are serious shortages of candidates for teaching or where chronic absenteeism is rampant vs. those where this is not an issue.

Similarly, what role technology can play in supporting teaching will depend on the kind of technology infrastructure available. What role the private sector or civil society can play in public private partnerships will depend on the strengths of these and of government institutions in each particular setting. To include and invite relevant stakeholders to collaborate, and to inspire them to change, it will be helpful to adopt approaches that build on strengths of the system and that generate and sustain trust among these stakeholders.

Key strategies of such systemic realignment include (i) arranging governance structures so they ensure congruence of goals, alignment of activities and optimization of resources, (ii) ensuring collaboration among all stakeholders, (iii) activating mediating layers and networks for facilitating implementation, and (iv) addressing specific elements of the system such as, for example, increasing incentives to attract qualified candidates to the profession, change regulations to enable multiple pathways of entry to the profession, or supporting the creation of school networks for ongoing professional development.

A critical first step in a strategy to support systemic reform should be developing clear standards of professional practice for teachers and for principals, for various points in their professional trajectories. These will provide guidance to the processes of professional development and human resources management and development of the system. Examples of professional standards are those developed by the National board of professional teaching standards in the United States <http://www.nbpts.org/>. These standards should map the developmental progression to advance in the following key dimensions of teaching quality:

- A Broad and deep knowledge base, including:
 - Subject matter knowledge, pedagogical and pedagogical content knowledge, knowledge of the students they teach and their context;
 - Social and communication skills, skills for collaboration in different networks and partnerships;
 - Knowledge about learning and diversity among learners (knowledge to support students with special needs and to of culturally responsive pedagogy;
 - Competence to act as autonomous professional who can plan, implement and assess their own practices and students' learning;
 - Competence to design learning opportunities in various digital (digital

Action 3. Continued

- skills) and physical (including out of school) learning environments;
 - Professional ideology, including shared understanding of professional values and ethics code (ethical conduct toward (i) students, (ii) practices and performance, (iii) professional colleagues, (iv) parents and community);
 - Research skills and skills to translate research based knowledge about what works into practices (skills to effectively use research based knowledge);
 - Awareness about the different dimensions of the teacher profession: social, philosophical, psychological, sociological, and historical basis of education and schools' societal connections;
 - Awareness about the different cross-curricular topics, like topics related to human rights and democracy, entrepreneurship education, sustainable development and globalization;
 - Competence to act in a role of an "adult" in a classroom.
 - Expertise in generating novel ideas and educational innovations
 - Positive attitude to continuous change, which requires tolerance to uncertainty and new and innovative ways of thinking;
 - Willingness to create a positive atmosphere supportive for creative processes and for curiosity, risk-taking related to classroom teaching and learning and creation of educational innovations and, moreover, awareness of importance of this attitude to creative outcomes;
- Competence for the implementation of a creative process, generate ideas and evaluate ideas related to classroom teaching and learning and creation of educational innovations;
 - Research skills (skills to use, produce and translate research based knowledge)
 - Competence for development of own expertise and school
 - A supportive attitude for Institutionalization in occupational group;
 - Self-regulation skills and skills for control over the work (skills for self-assessment);
 - Competence for working in networks and teams, like multiprofessional teams at the school site;
 - Competence in curriculum design and as an innovator for pedagogical approaches and learning environments;
 - A facilitator, coach, mentor or a trainer of other teachers;
 - Competence to reflect on teacher's personal pedagogical views (reflection for, in and on action);
 - Competence to use assessment outcomes for school development and is able to develop the school culture in different networks and partnerships with students, parents other experts and stakeholders;
 - Competence for the development of own expertise through reflective activities, research based knowledge, mentoring, in-service training and seminars and workshops and willingness to use this competence.

Action 4. Empower teachers, so they can empower students.

Education leaders will develop and continuously use a narrative that empowers teachers, highlighting the elements in the strategy that foster teacher professionalism and agency.

If the system that supports quality learning and teaching is to empower students to become architects of their own lives, it must empower teachers to be professionals. Only empowered teachers can empower students. This means developing teacher professionalism, engaging teacher voice and agency in educational innovation and transformation, and empowering teachers to take ownership of their own learning.

Professionalism, the deep knowledge and expertise that prepares teachers to lead instructional processes in ways that support students to become empowered global citizens, requires continuous and high quality opportunities to enhance their capacity. In a rapidly changing world, teachers need to be cognizant of the changing nature of knowledge, learning and environments. There is a need to equip teachers with new roles such as being facilitators of learning and designers of the learning environment. Teachers need to embrace new pedagogies and transform pedagogical practices, for example, to account for new ways in which learners acquire information through technology and social media. Teachers must appreciate their role in cultivating competencies that educate the whole child, including problem solving, critical thinking, collaboration, creativity, and interpersonal skills. Teachers also play a critical role in helping students build character and inculcate values. While teacher professionalism depends in part on teachers capacities, it depends also on the position or status of teachers. These are very influential in the public image of teachers and can act as self-fulfilling prophecies shaping who is attracted to the teaching profession and what

kind of professional aspirations and efficacy they develop. At the school level, for example, the nature of leadership, collaboration culture, structure of networks and school-society-family partnerships are important school-level factors allowing or preventing the teachers to behave as professionals. Particularly important in building a 21st century education systems and teaching profession will be to engage teacher expertise not only in the classroom, but in identifying options to improve education and make it more relevant, which is to say in policy development and execution.

It should be recognized that high quality teaching is embedded in a social context and system which should be structured to support continuous improvement and development. Such a system includes the public narrative about education and teachers, the working conditions of teachers, the organization of schools and the extent to which they provide opportunities for teachers voice and professionalism, mechanisms of evaluation and support of teachers aligned with pathways for career development using clear standards of practice. Structures that encourage continuous reflection on teachers' practice and learning, including mechanisms of accountability that hold teachers, school leaders and education administrators accountable to students and to the goals citizens place on education. The professional identity of the teachers, to always do what is best, should be anchored in the rights of children and students to learn and develop to achieve their human rights.

It is imperative that teachers consistently and continuously keep up-to-date with new knowledge, skills and teaching practices. Stakeholders need to provide support in terms of time and resources to meet the needs of teachers at different stages of their careers. For example, professional development goes beyond workshops and courses, to include school-embedded professional development, sophisticated induction and mentoring, collaborative teacher networks and project-based research-cum-inquiry approaches to improving teaching practices and learning outcomes.

Action 5. Support a Robust pipeline of qualified applicants

The strategy will outline specific steps to make teaching a sufficiently attractive profession so that candidates have, at least, levels of general cognitive skills and communicative abilities comparable to those of the top half of the recent cohorts of high school graduates. These will include compensation conditions, assessment mechanisms to select entrants, alternative pathways to enter the profession,

Quality teaching requires quality teachers, and this requires qualified applicants to the profession who can make the most of an excellent initial preparation, take ownership of their own learning, and continue to learn throughout their careers. In many contexts, there are not enough applicants to the profession to meet replacement and expansion needs for the system, and to provide talent into schools serving disadvantaged students, often living in high poverty or hard to reach areas. Leaders need to take responsibility for teacher shortages, where they exist, and to make teaching an attractive profession to highly skilled and motivated applicants who are passionate about empowering their students.

Policies that address incentives, working conditions and the status of teaching can increase the supply of talent into the profession. These include compensation and rules to determine increases in compensation over time. Clear career trajectories, and performance incentives, are important in making the teaching career attractive. Other benefits, including health and educational benefits, are also important, as is the overall status and reputation of the profession, and the actual conditions of work teachers face in schools.

Where those policies are insufficient to produce sufficient applicants of high quality to teacher preparation programs, multiple pathways of entry should be opened, allowing entry at multiple points in the careers of individuals, for instance making teaching a second career for mid career professionals. Creating such multiple points of entry requires addressing legal and regulatory constraints, as in many jurisdictions they make it difficult for teaching to be a second career.

In order to support the kind of professionalism that prepares candidates for the high levels of performance necessary to empower all students it is important to devise effective mechanisms to assess teacher capacity of applicants. Candidates should be 'screened in' to the profession, rather than 'screened out', and multiple pathways should be available to enter, provided all of them are of high quality, as assessed by reliable instruments that assess teacher capacities, as they align with clearly established standards of practice.

Assessment systems should screen for competencies and merit, and be aligned with professional teaching standards. Where teacher jobs are given out to reward political loyalties, or where factors other than merit of candidates play a role in teacher selection, those practices should be

Action 5. Continued

denounced as the patronage and corruption which they are. No policies will be able to compensate for the demoralizing effects and the weak pool of talent that such corruption brings to an education system. Adequate selection of candidates into the teaching profession should be multidimensional, and include cognitive skills, communication skills, interpersonal skills, character, and aptitude to teach. Assessment of these competencies and dispositions should depend on multiple forms of assessment, tests, as well as interviews, recommendations and observed performance.

Multiple pathways to enter the profession should include alternative certification mechanisms coupled with impetus to high quality teacher professional development. Where such shortages are acute the option of allowing mobility of teachers across geographic boundaries should be considered, this could include teachers in emerging economies contributing to close the shortages in the aging early industrialized societies.

Central to constructing systems that support teacher professionalism is to build an effective continuum for professional development, that effectively integrates teachers pre-service education and life-long professional development. This requires rethinking the nature of the relationships between the universities responsible for teachers pre-service teacher education and the organizations responsible for teacher evaluation and ongoing support, typically local school government organizations, such as school districts in the United States or municipalities. Building such a continuum requires also devising effective forms of collaboration between teacher educators, researchers and teachers and making in-service professional development a more inquiry and research based activity.

Action 6. Support highly effective initial teacher preparation

The strategy developed by the blue ribbon commission should include incentives and supports for initial preparation institutions to review and, if necessary, redesign their programs aligned with the following principles.

Initial teacher preparation is critical in the professional trajectory of teachers. It should be clearly aligned with professional standards of practice, and well articulated with subsequent opportunities for professional development, particularly those supporting beginning teachers.

Good initial teacher preparation will provide a solid foundation in conceptual and theoretical knowledge, ample opportunities to practice, reflect on practice and integrate such experience with the conceptual and theoretical preparation, provide teacher candidates with the capacity to evaluate research and translate it for use to inform their practice, and develop the capabilities to conceptualize their practice and share this knowledge with others. Teacher preparation programs need to be tightly connected with schools and with practicing teachers. The principles which should guide teacher preparation, initial as well as lifelong, include the following ...

Improve teachers' pre-service education programs

- Align programs with professional teaching standards, where possible translate those standards into specific competencies that programs should develop.
- Enhance teaching and learning practices. Include a robust and rigorous apprenticeship, with appropriate mentoring.

- Innovation in learning environments in teacher preparation institutions, especially using technology in teacher education.
- Develop a balanced curriculum, competency based where possible, that helps students understand and practice effective instructional techniques, such as providing feedback, using metacognitive strategies, use of cognitive activation strategies, peer tutoring or mentoring and collaborative group learning, and classroom management.
- Systematically collect information on performance of graduates, and use this information for program review.
- Develop robust partnerships with school districts, and support initial entrants to the profession with ongoing professional development.

Holistic and integrated view to teachers' pre-service education and life-long professional development

- Adopt a holistic view from selection of teachers to retirement from the point of view of pre-service education and life-long professional development. Ensure that professional development programs/activities are articulated across time/stages of the career as well as coordinated and integrated across providers.
- Collaboration between subject department, department of teacher education, schools for teaching practice.
- From in-service orientation to life-long professional development (variation in PDP).

Goal-orientation in the development

- Personal development plan: 1) in the beginning of studies; 2) during the studies; 3) in the beginning of teacher profession; 4) during teacher profession. These plans should be based on needs of individual teachers and the aims are outlined above for quality teacher.
- Standards should form a core element of professional development policies.

Action 6. Continued

- Continuous formative and self-assessment of the progress of teachers and focusing of measures and activities according to these assessments. An attitude that assessment is for improvements not for punishments.
- Development plans for the provider of education and for schools. These plans should be based on needs of teachers and aims outlined for quality teaching.
- Promote the use of a collaborative process for identifying needs, designing and implementing programs, identifying or creating materials, and evaluating outcomes of professional development.

Innovative projects

- Collaboration between education experts, municipality schools and education technology companies in teachers PDPs.
- Encourage those providing professional development programs to model the capacities (i.e., knowledge, skills, and dispositions) that educators are expected to exhibit in their professional practice. School leaders need to provide support in terms of time and resources to meet the needs of teachers at different stages of their careers.
- Promote mentoring by facilitating exchange of information and expertise among those in the teaching profession.

Support participation in professional development

- Encourage educators' participation in and learning from professional development programs, system policies, procedures, and resources for recruitment, retention, evaluation, remuneration, and promotion of educators should emphasize the same knowledge, skills, and dispositions.

Align professional development and other policies

- Other education system policies (e.g., curriculum, examinations, school self-assessment and improvement) should also be consistent with the desired behaviors that professional development processes are organized to promote.

Action 7. Support professional trajectories, through continued development and learning for teachers

The strategy will incentivize and regulate innovative forms of teacher professional development which support the development of teachers along the career trajectories, and the development of school cultures which foster organizational learning.

The strategy will incentivize and regulate innovative forms of teacher professional development which support the development of teachers along the career trajectories, and the development of school cultures which foster organizational learning.

Given the rapid changes in society, teachers need to be life-long learners and model learners for their students. Supporting such life-long learning requires especially school-embedded professional development, sophisticated induction and mentoring, collaborative teacher networks, and project-based research to improve teaching practices and learning outcomes and access to good practice and to knowledge about what works based on the best available evidence on learning and teaching.

The increasing availability of data on student learning and teacher performance at the school and district level enables the identification of micro-practices which are effective, of what works in the classroom in ways that can support identification of good

practice engaging the knowledge of large groups of teachers and of improvement networks. In most countries this will require revisiting the existing architecture of professional development, largely consisting of workshops and courses, decoupled from the needs teachers face, and innovating designing more effective forms that support reflection from action, learning from peers and in teams, alignment between professional development and career pathways, differentiated opportunities and supports for teachers at different points of their careers. New forms of professional development should support the construction of school cultures which make schools 'learning organizations'.

Effective use of technology can support the creation of networks and communities of practice that enable the creation of collective intelligence, crowd sourcing of good practice, and other forms of organization of support that sustain teacher practice with access in real time to expert knowledge. The creation of such networks should be especially important to overcome the isolation of teachers, more acute in rural areas and small schools.

Transforming teaching and learning is critical to prepare the young to invent the future. While teacher quality is the result of a complex system, such a system is tractable. Key to such transformation are leaders who see the system that connects the dots that support excellent teaching, who build a narrative to help others understand such a system, and who build and support the teams and processes that can align such a system in support of a bold vision of educational transformation.

